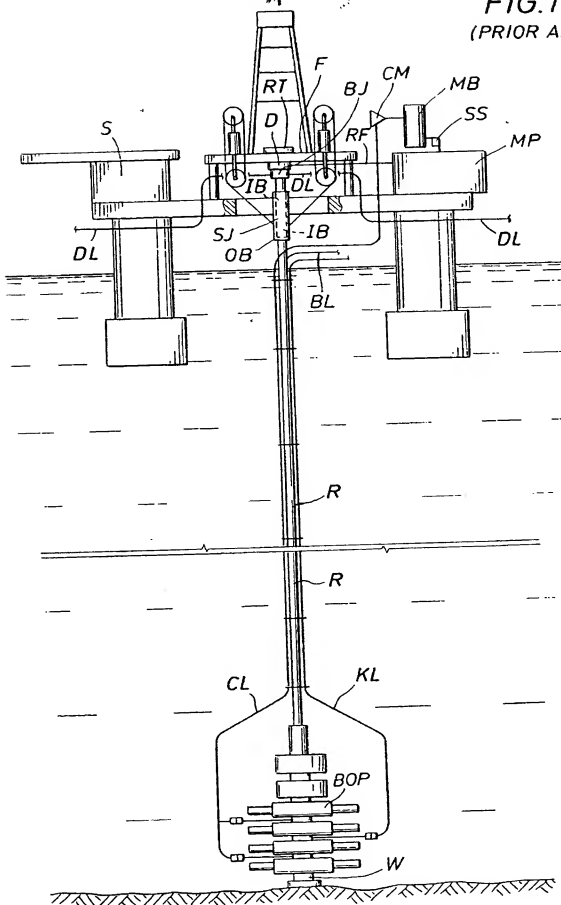


TITLE: METHOD FOR PRESSURIZED
MUD CAP AND REVERSE CIRCULATION
DRILLING FROM A FLOATING DRILLING RIG
USING A SEALED MARINE RISER
INVENTOR: Don M. Hanuegan
SERIAL NO.: Unknown
ATTY DOCKET #: H055010.0048US0

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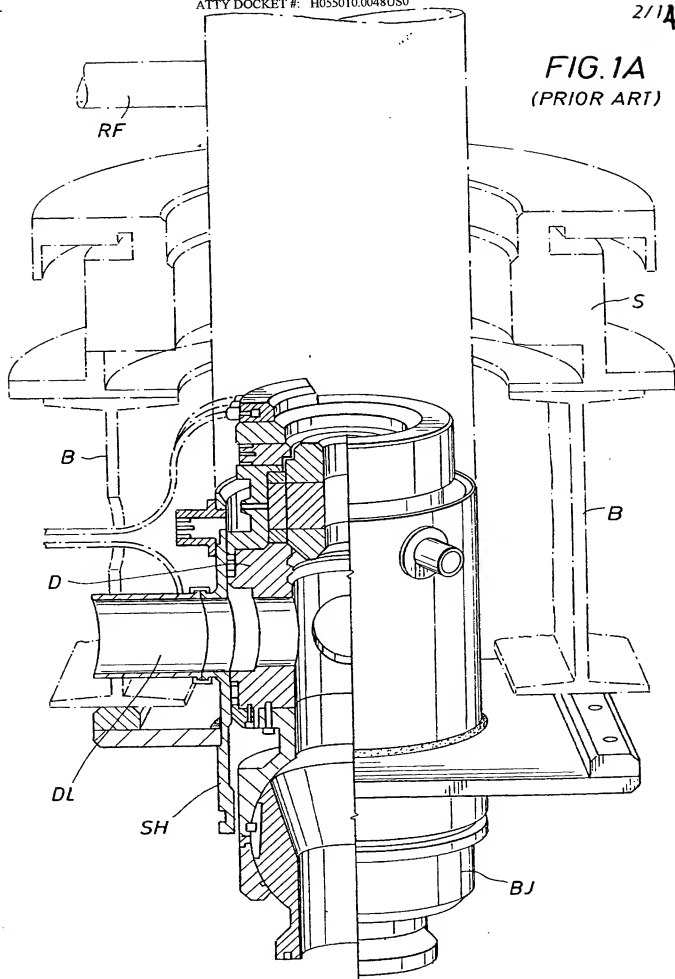
FIG. 1
(PRIOR ART)



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FIG. 1A
(PRIOR ART)



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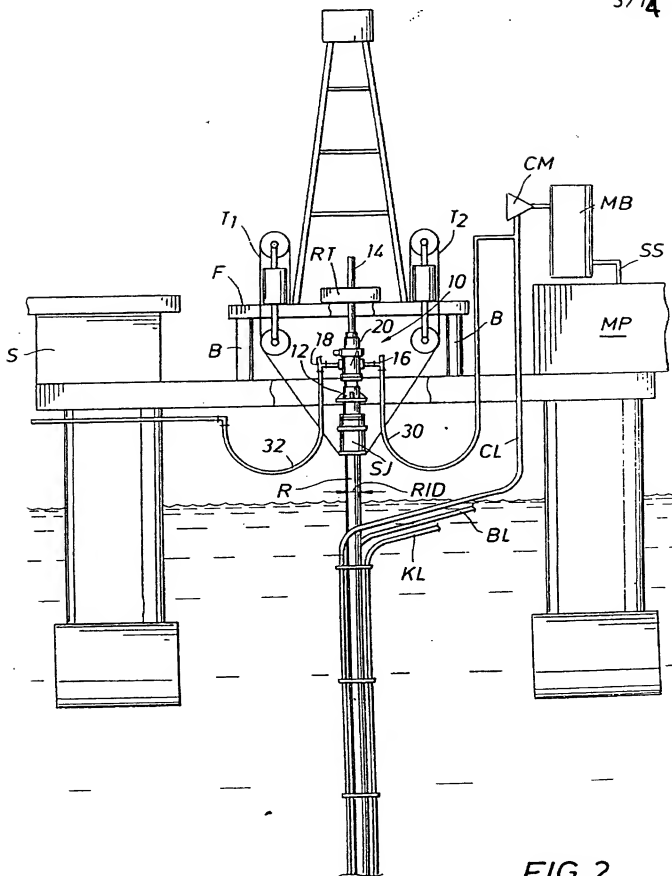
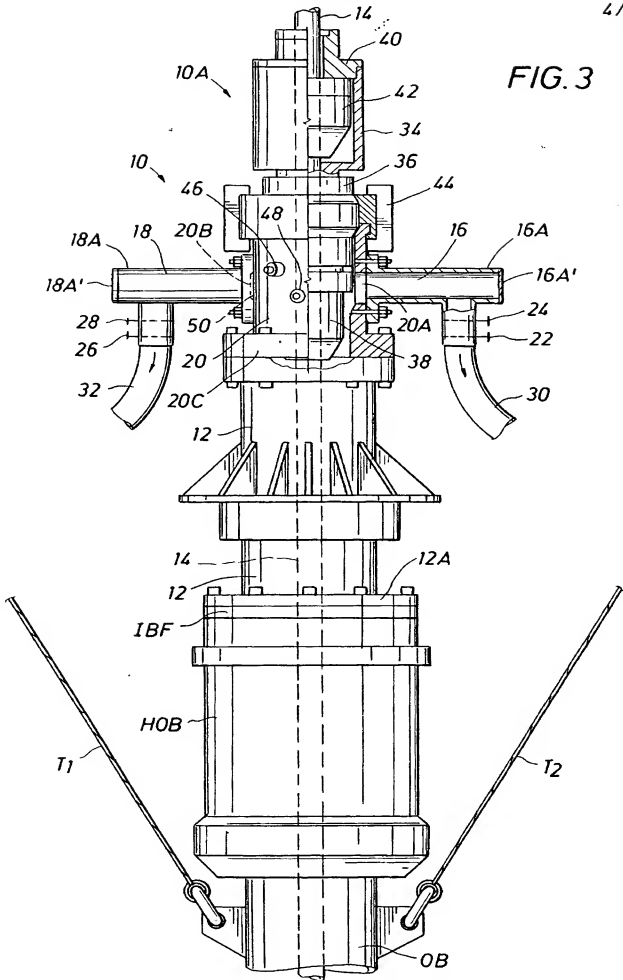


FIG. 2

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FIG. 3



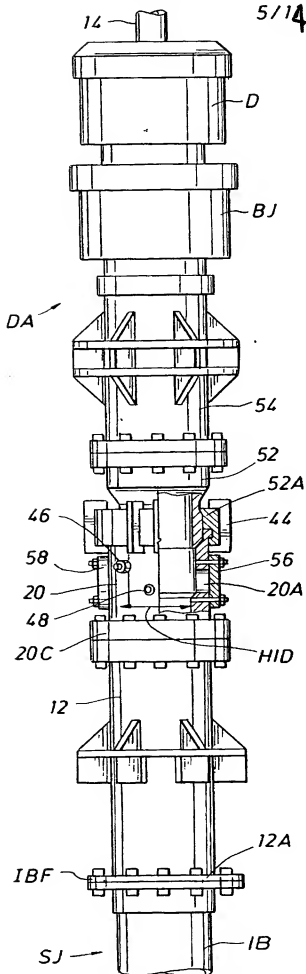


FIG. 4

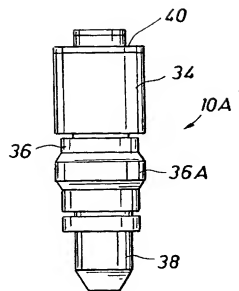


FIG. 5

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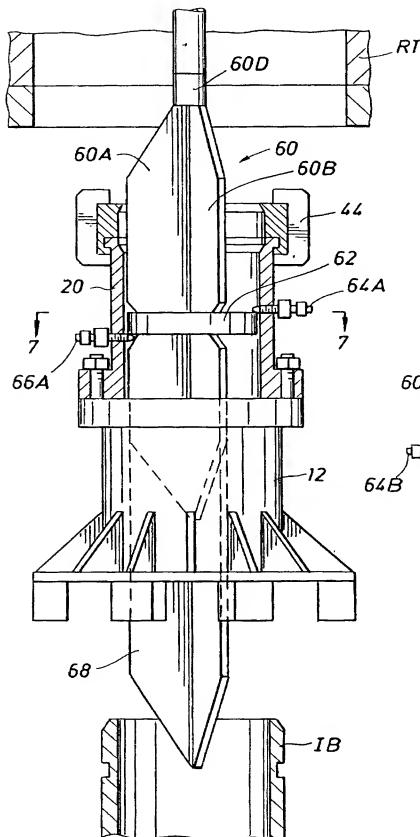


FIG. 6

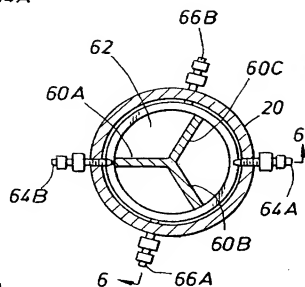


FIG. 7

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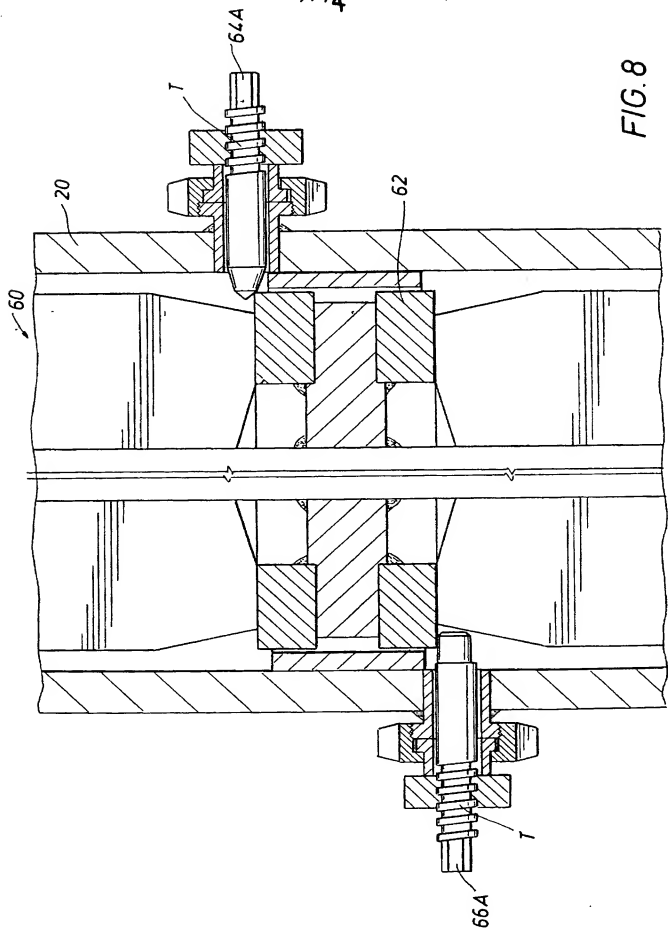
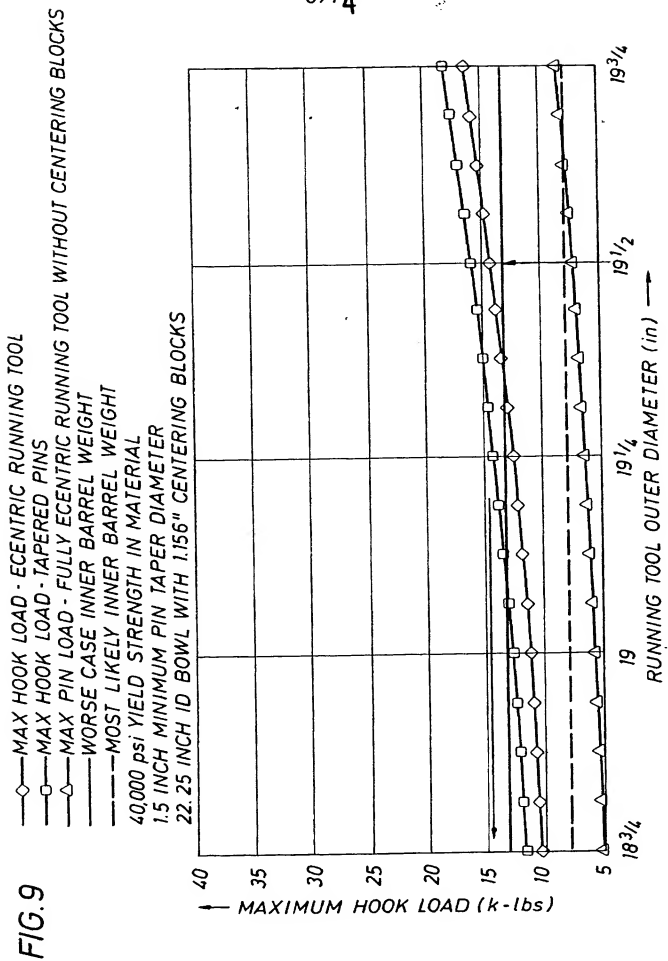


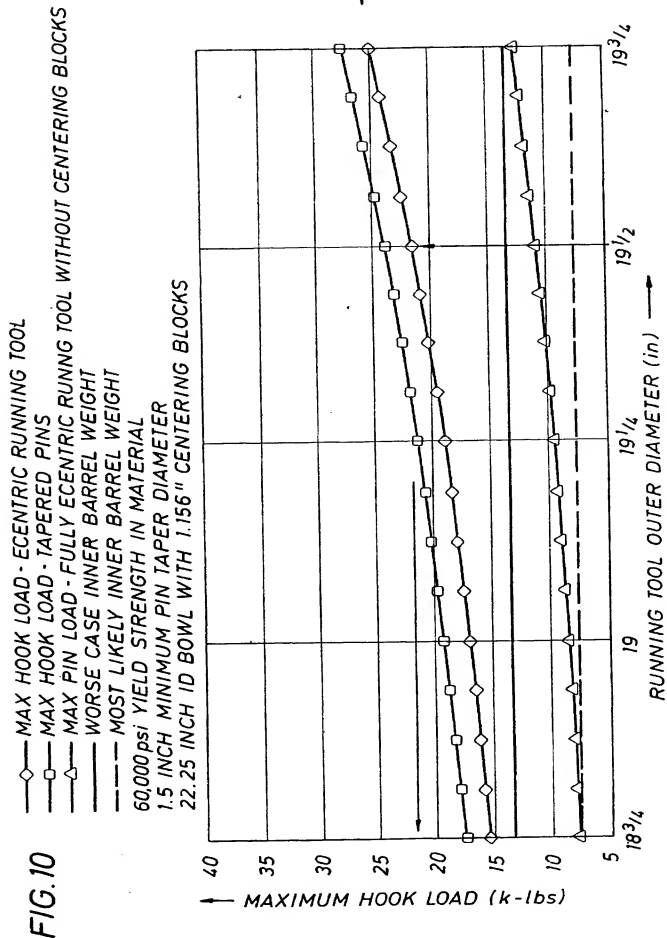
FIG. 8

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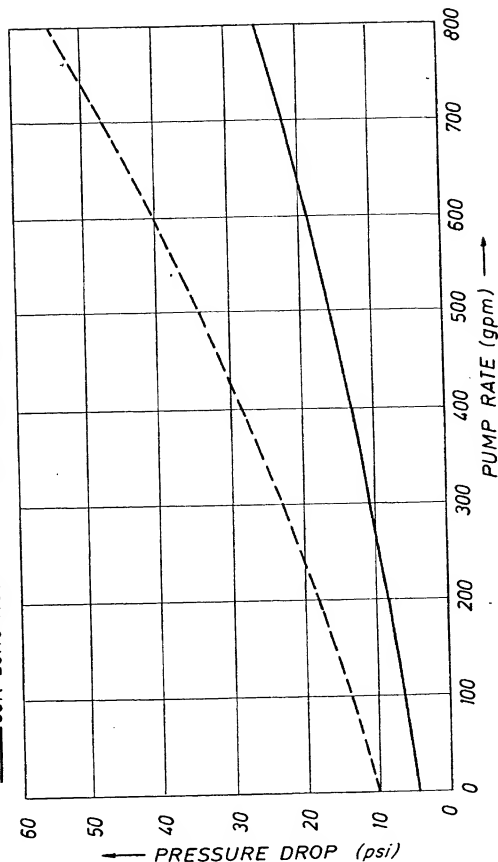


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FIG. 11

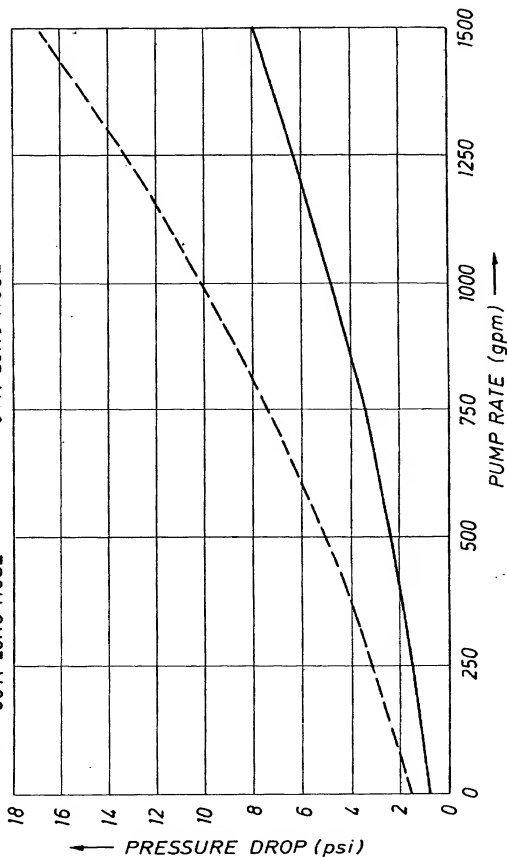
16 ppq MUD, 30 cp vis
10 lb / 100 ft² YIELD
500 gpm BOOSTER PUMP RATE
291 fpm MAX AV IN 9.6 INCH HOLE
85 fpm MAX AV IN 20 INCH RISER
(800 gpm PUMP RATE + 500 gpm BOOSTER PUMP RATE THROUGH HOSE)
—— 30ft LONG HOSE --- 64ft LONG HOSE



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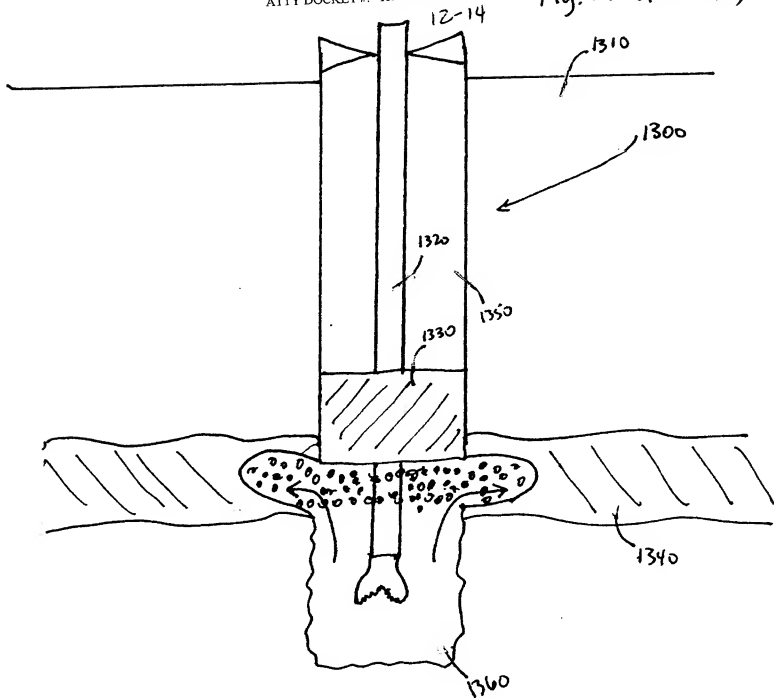
FIG. 12

16 ppq MUD, 30 cp vis
10 lb / 100 ft² YIELD
500 gpm BOOSTER PUMP RATE
125 fpm MAX AV IN 18 INCH HOLE
131 fpm MAX AV IN 20 INCH RISER
(1500 gpm PUMP RATE + 500 gpm BOOSTER PUMP RATE THROUGH HOSE)
—— 30 ft LONG HOSE
----- 64 ft LONG HOSE

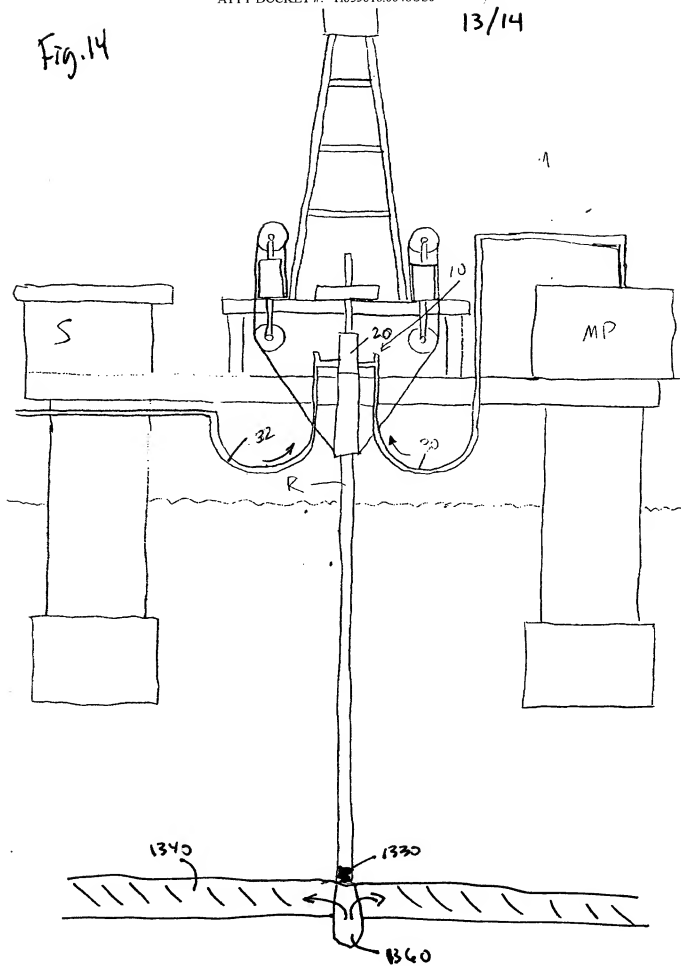


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Fig. 13 (Prior Art)



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Fig. 15 14/14

